

AMENDMENTS TO THE SPECIFICATION:

Please replace the specification paragraph that begins at page 3, line 25, with the following replacement paragraph:

In another embodiment, a plurality of transducers ~~are~~ is supported by at least a portion of the distal end of the catheter assembly at a preselected number of anchoring points, wherein an inner surface of each transducer is positioned at a preselected distance from an outer surface of the catheter. Each transducer has a proximal end and a distal end, wherein the distal end of the first transducer is positioned at a preselected distance from the proximal end of a second transducer.

Please replace the specification paragraph that begins at page 8, line 11, with the following replacement paragraph:

In one embodiment, a transducer 42 is supported by at least a portion of a distal ~~end~~ portion 44 of the catheter assembly 30 at a preselected number of anchoring points 46. Transducer 42 may be a piezoelectric crystal or any other suitable material. For use in diagnostic ultrasound and delivery of therapeutic substances, the piezoelectric crystal may be formed from, for example, a lead zirconate titanate compound. Model Nos. PZT4 and PZT8, manufactured by Morgan Matroc, are considered to be "hard" materials, i.e., can withstand high levels of electrical excitation and mechanical stress, and are formed from a lead zirconate titanate compound. Transducer 42 can be defined by a hollow tubular body having an outer surface 48 and an opposing inner surface 50. Outer surface 48 and inner surface 50 can be coated conformally with perylene or a similar compound. The addition of the coating to outer surface 50 both electrically insulates the positive and negative poles of the crystal, and also isolates fluids, such as a therapeutic substance solution, from transducer 42. Anchoring points 46 are formed from medical grade adhesives. The selected choice of medical grade adhesive should be mutually compatible both with the coating and the material forming distal ~~end~~ portion 44 of catheter assembly 30. Anchoring points 46 should act as standoffs to separate inner surface

50 of transducer 42 from an outer surface 52 of the catheter, thereby creating a gap 54.

Please replace the specification paragraph that begins at page 10, line 16, with the following replacement paragraph:

In lieu of having a porous balloon, in an alternative embodiment illustrated in Figure 5B, a sealing balloon 64 can be mounted on distal-end portion 44 of the catheter tube 36 and is inflated by an inflation lumen 66, which can be exterior to guidewire/perfusion lumen 34, to engage the walls of passageway 40. Sealing balloon 64 can be located distal to transducer 42. Sealing balloon 64 may be made of an impermeable expandable material, for example latex, and prevents the therapeutic substance eluted from the distal end of delivery/electrical lumen 32 from being carried off by the downstream flow of the blood. Sealing balloon 64 is kept in position by balloon seal members 68, which, for example, may be laser welded to the catheter distal-end portion 44, or secured to the catheter distal-end portion 44 by medical grade adhesive. This embodiment may optionally include perfusion holes 62 on guidewire/perfusion lumen 34 to maintain blood flow across sealing balloon 64, and cool transducer 42, increasing possible treatment time as described earlier. It is contemplated by one of ordinary skill in the art that any suitable combination of the above described embodiments can be used in combination with one another. For example, the combination of both a porous balloon in addition to sealing balloon 64 can be used with any of catheter assemblies 30 of the present invention.

Please replace the specification paragraph that begins at page 12, line 24, with the following replacement paragraph:

Figure 7 illustrates another embodiment of catheter assembly 30 having three transducers 42a, 42b and 42c disposed at distal portion 57 of guidewire/perfusion lumen 34. Each transducer 42a-42c has a proximal end 72 and a distal end 74, which defines the length, l_3 , of each transducer 42a-42c. Each distal end ~~[[44]]~~ 74 of transducers 42a and 42b is positioned at a preselected distance d_1 from the proximal end 72 of the adjacent transducer.

Please replace the specification paragraph that begins at page 13, line 4, with the following replacement paragraph:

Transducers 42a-42c are mounted to the distal ~~end~~ portion 44 of the catheter with medical grade adhesive. The selected medical grade adhesive is compatible both with the perylene or other compound coating transducers 42a-42c and the material forming the distal portion 57 of guidewire/perfusion lumen 34.